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# The Effectiveness of a Failure Mode and Effects Analysis on a Cogeneration Plant

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THE EFFECTIVENESS OF A FAILURE MODE AND EFFECTS  
ANALYSIS ON A COGENERATION PLANT

A Major Qualifying Project Report

submitted to the Faculty

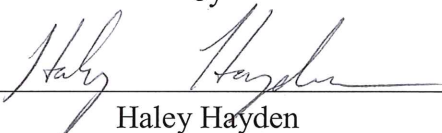
of the


WORCESTER POLYTECHNIC INSTITUTE

In partial fulfillment of the requirements for the

Degree of Bachelor of Science

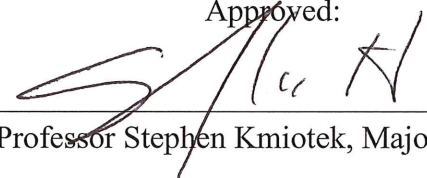
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Date: April 16, 2015

Approved:

  
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This MQP contains information deemed confidential to the business interest of the industrial sponsor. Please contact Stephen Kmiotek at [sjkmiotek@wpi.edu](mailto:sjkmiotek@wpi.edu) for additional information.

## **Abstract**

A Failure Modes and Effects Analysis (FMEA) is an organized procedure used to determine where an industrial process requiring improvement. An FMEA identifies the components or pieces of equipment in a process that are most likely to fail as well as the components that will have the greatest impact on the process if failure occurs. This project illustrates how to utilize an FMEA on an industrial process to identify and rank problem areas. An FMEA was conducted on a sample plant and the results were used to identify the effectiveness, advantages and disadvantages of using an FMEA as a process safety tool.